

# Warm-up!

1. Factor

$$3x^2 + 14x + 8$$

$$(x+4)(3x+2)$$

24

2. Simplify

$$2\sqrt{8} \quad 4\sqrt{3}$$

$$16\sqrt{6}$$

$$3x^2 + 2x + 12x + 8$$

$$x(3x+2) + 4(3x+2)$$

$$(x+4)(3x+2)$$

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## 202 Algebra Review Continued

### Systems of Equations

2 Methods for solving

Substitution

Elimination

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## Substitution

ex 1

$$\rightarrow x + 4y = 26$$

$$x = 5y - 10$$

$$5y - 10 + 4y = 26$$

$$9y - 10 = 26$$

$$9y = 36$$

$$y = 4$$

$$x = 10$$

$$(10, 4)$$

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## Substitution

ex 2

$$3x + y = 18$$

$$4x + 5y = 13$$

$$y = 18 - 3x$$

$$4x + 5(18 - 3x) = 13$$

$$4x + 90 - 15x = 13$$

$$-11x = -77$$

$$(7, -3)$$

$$x = 7 \quad y = -3$$

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## Elimination

ex 2

$$\begin{cases} 3x + y = 18 \\ 4x + 5y = 13 \end{cases} \quad \begin{matrix} -5 \\ \end{matrix}$$

$$\begin{array}{r} -15x - 5y = -90 \\ \hline -11x \quad \quad = -77 \end{array}$$

$$\begin{aligned} x &= 7 \\ y &= -3 \end{aligned}$$

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## Elimination

ex 3

$$\begin{cases} 2x + 3y = 12 \\ 5x - 2y = 11 \end{cases} \quad \begin{matrix} -5 \\ 2 \end{matrix}$$

$$(3, 2)$$

$$\begin{array}{r} -10x - 15y = -60 \\ 10x - 4y = 22 \\ \hline -19y = -38 \\ y = 2 \end{array}$$

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## Elimination

ex 4

$$\begin{pmatrix} -3x + 5y = 12 \end{pmatrix} \cdot 2$$

$$6x - 10y = -21$$

$$\begin{array}{r} -6x + 10y = 24 \\ \hline \end{array}$$

$$0 \neq 3$$

FALSE



Parallel Lines

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## Elimination

ex 5

$$\begin{pmatrix} 3x + 2y = 9 \end{pmatrix} \cdot -3$$

$$9x + 6y = 27$$

$$\begin{array}{r} -9x - 6y = -27 \\ \hline \end{array}$$

$$0 = 0$$

TRUE

$\infty$  # of sol's on the line  
 $3x + 2y = 9$

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# Assignment

## p743

## 7-22

Quiz Wednesday

Factoring

Radicals

Systems

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